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NATIONAL EUTROPHICATION SURVEY

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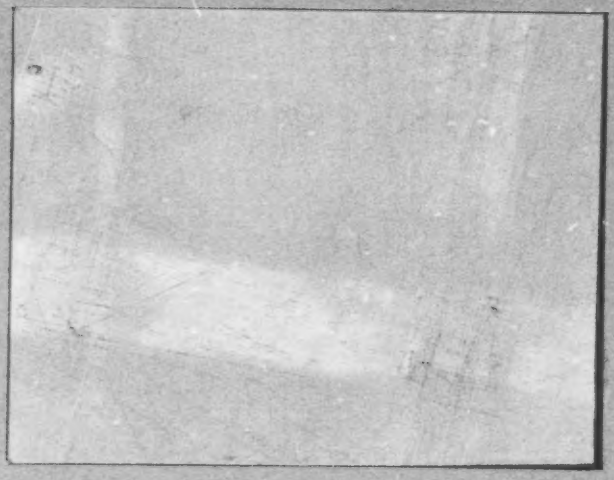

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CORVALLIS ENVIRONMENTAL RESEARCH LABORATORY - CORVALLIS, OREGON

and

ENVIRONMENTAL MONITORING & SUPPORT LABORATORY - LAS VEGAS, NEVADA

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REPORT
ON
UTAH LAKE
UTAH COUNTY
UTAH
EPA REGION VIII
WORKING PAPER No. 861

WITH THE COOPERATION OF THE
UTAH STATE DIVISION OF HEALTH
AND THE
UTAH NATIONAL GUARD
SEPTEMBER, 1977

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16. ABSTRACT

Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

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FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point-source discharge reduction and non-point source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's fresh water lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGEMENT

The staff of the National Eutrophication Survey (Office of Research and Development, U.S. Environmental Protection Agency) expresses sincere appreciation to the Utah Department of Social Services and the Utah Department of Natural Resources for professional involvement, to the Utah National Guard for conducting the tributary sampling phase of the Survey, and to those Utah wastewater treatment plant operators who voluntarily provided effluent samples and flow data.

The staffs of the Bureau of Water Quality of the Division of Health and the Division of Wildlife Resources provided invaluable lake documentation and counsel during the Survey, reviewed the preliminary reports, and provided critiques most useful in the preparation of this Working Paper series.

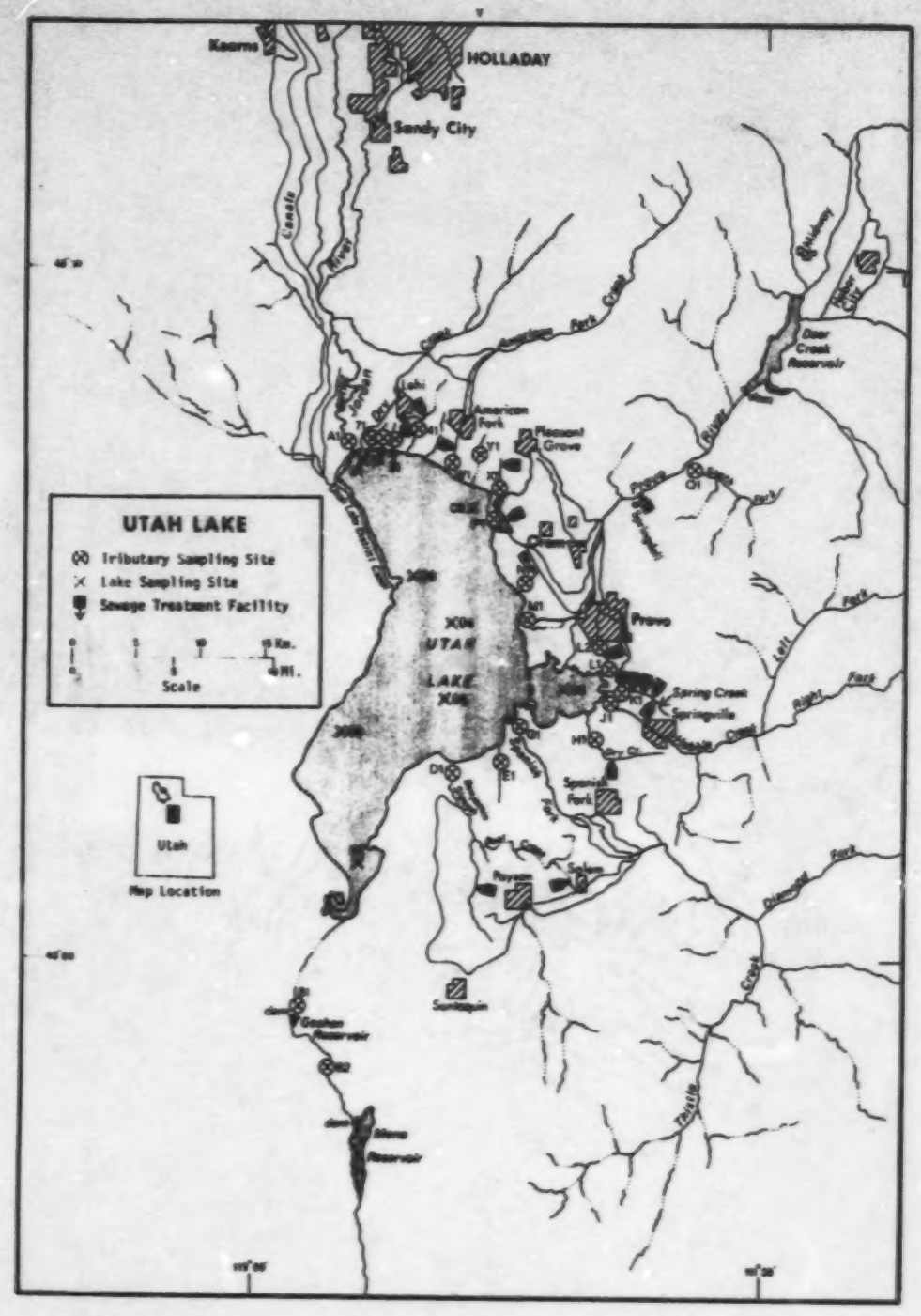
Major General Maurice L. Watts, the Adjutant General of Utah, and Project Officer Lt. Colonel T. Ray Kingston, who directed the volunteer efforts of the Utah National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES AND RESERVOIRS

STATE OF UTAH

NAME	COUNTY
Bear	Rich, UT; Bear Lake, ID
Deer Creek	Wasatch
Echo	Summit
Fish	Sevier
Flaming Gorge	Daggett, UT; Sweetwater, WY
Huntington	Emery
Joes Valley	Emery
Lower Bowns	Garfield
Lynn	Box Elder
Minersville	Beaver
Moon	Duchesne
Navajo	Kane
Newcastle	Iron
Otter Creek	Piute
Panguich	Garfield
Pelican	Uintah
Pineview	Weber
Piute	Piute
Porcupine	Cache
Powell	Garfield, Kane, San Juan, UT; Coconino, AZ
Pruess	Millard
Sevier Bridge	Juab, Sanpete
Starvation	Duchesne
Steinaker	Uintah
Tropic	Garfield
Utah	Utah
Willard Bay	Box Elder


Kearns
HOLLADAY
Sandy City
Canals
Jordan River
Mill Creek
American Fork
Pleasant Grove
Provo River
Provo
UTAH LAKE
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Scale
Km.
Mi.
Utah
Map Location
Spanish Fork
Spring Creek
Springville
Hobble Creek
Left Fork
Right Fork
Diamond Fork
Thistle Creek
Goshen Reservoir
Payson
Salem
Santaquin
Deer Creek Reservoir

UTAH LAKE

STORET NO. 4924

I. CONCLUSIONS

A. Trophic Condition:

Survey data indicate that Utah Lake is hypereutrophic. It ranked last in overall trophic quality when the 27 Utah lakes and reservoirs sampled in 1975 were compared using a combination of six parameters*. Twenty-five of the water bodies had less median total phosphorus, 23 had less median inorganic nitrogen, 22 had less and one had the same median dissolved orthophosphorus, all of the others had less mean chlorophyll a, and all but one had greater mean Secchi disc transparency. Near-surface dissolved oxygen ranged from 48 to 75% of saturation in September (corrected for altitude but not chlorides).

Survey limnologists observed many emergent aquatic plants in the southern half of the lake and commented on the grayish water color in May. The numbers of blue-green algae in the August and September phytoplankton samples indicate bloom conditions at those times (see page 8).

B. Rate-Limiting Nutrient:

The results of the algal assays indicate phosphorus limitation in May and September. The lake data also indicate phosphorus limitation in May and September but nitrogen limitation in August.

C. Nutrient Controllability:

1. Point sources--The total phosphorus contribution of munici-

* See Appendix A.

pal and industrial wastewater treatment plants amounted to 66.0% of the total load to Utah Lake during the sampling year. The cities of Provo, Orem, American Fork, and Spanish Fork added 19.6%, 16.8%, 8.3%, and 5.0% of the total load, respectively. However, the Spanisn Fork trickling filter effluent is disposed of by spray irrigation, and it is not likely that very much, if any, reaches the lake (Tate, 1976).

The U.S. Steel industrial wastewater treatment plant contributed 1.7% of the total phosphorus load, and five other industrial sources collectively contributed 2.1%.

The present phosphorus loading of 0.51 g/m^2/year is nearly three times that proposed by Vollenweider (Vollenweider and Dillon, 1974) as a eutrophic loading. Elimination of all point-source contributions would reduce the loading to less than a eutrophic loading. Therefore, all phosphorus inputs should be minimized to the greatest practicable degree to slow the aging of the lake.

2. Non-point sources--Non-point sources, including direct precipitation, added 34.0% of the total phosphorus load to the lake. The main non-point phosphorus sources were the Spanish Fork, Mill Race Creek, and Benjamin Slough which added 5.6%, 6.6%, and 3.6%, respectively (see page 14).

The phosphorus export rates of most of the tributaries were between 1 and 36 $kg/km^2/yr$ (see page 17). However, some of the tributaries had considerably higher rates. The export rates of Mill Race Creek, Unnamed Stream 51, and Unnamed Stream 71 were

303, 85, and 205 kg/km^2/yr, respectively. These higher rates may be due to unknown point sources, underestimation of known point sources, or insufficient sampling. Whatever the cause, a need for further investigation is indicated.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS†

A. Morphometry††:

1. Surface area: 396.60 kilometers².
2. Mean depth: 2.1 meters.
3. Maximum depth: 4.3 meters.
4. Volume: 832.860 x 10^6 m^3.
5. Mean hydraulic retention time: 2.5 years (based on outflow).

B. Tributary and Outlet:
(See Appendix C for flow data)

1. Tributaries -

Name	Drainage area (km^2)*	Mean flow (m^3/sec)*
Benjamin Slough	326.3	1.320
Unnamed Canal E-1	12.4	0.132
Spanish Fork	1,813.0	2.075
Dry Creek	98.4	0.420
Hobble Creek	297.8	0.617
Spring Creek K-1	24.1	0.250
Mill Race Creek	44.0	1.240
Provo River	1,787.1	5.296
Unnamed Stream N-1	3.4	0.330
Unnamed Stream P-1	24.6	0.970
American Fork Creek	163.2	0.038
Pleasant Grove Waste Ditch (X-1)	98.4	0.750
Unnamed Stream Y-1	3.6	0.111
Spring Creek 41	18.1	0.520
Unnamed Stream 51	1.0	0.023
Unnamed Stream 61	1.8	0.010
Unnamed Stream 71	1.0	0.210
Current Creek 81	999.7	0.298
Minor tributaries & immediate drainage -	761.9	2.570
Totals	6,479.8	17.180

2. Outlet -

Jordan River	6,876.4**	10.620**

† Table of metric conversions--Appendix B.
†† Sudweeks, 1975.
* For limits of accuracy, see Working Paper No. 175, "...Survey Methods, 1973-1976".
** Includes area of lake; lesser outflow due to evaporation (Cruff, 1976).

C. Precipitation*:

1. Year of sampling: 54.8 centimeters.

2. Mean annual: 46.3 centimeters.

* See Working Paper No. 175.

III. WATER QUALITY SUMMARY

Utah Lake was sampled three times during the open-water season of 1975 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from one or more depths at eight stations on the lake (see map, page v). During each visit, a single depth-integrated (near bottom to surface) sample was composited from the stations for phytoplankton identification and enumeration; and during the September visit, two 18.9-liter depth-integrated samples were composited for algal assays. Also each time, a depth-integrated sample was collected from each of the stations for chlorophyll a analysis. The maximum depths sampled were 1.5 meters at stations 1 and 2; 1.8 meters at stations 3 and 8; 2.1 meters at stations 4 and 6; 1.2 meters at station 5; and 0.9 meters at station 7.

The sampling results are presented in full in Appendix D and are summarized in the following table.

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR UTAH LAKE
STORET CODE 4924

PARAMETER	1ST SAMPLING (5/12/75) 8 SITES RANGE	MEAN	MEDIAN	2ND SAMPLING (8/ 8/75) 8 SITES RANGE	MEAN	MEDIAN	3RD SAMPLING (9/19/75) 8 SITES RANGE	MEAN	MEDIAN
TEMP (C)	10.9 - 15.2	12.5	12.3	17.5 - 20.9	19.3	19.5	16.4 - 18.9	18.2	18.4
DISS OXY (MG/L)	7.4 - 8.8	8.4	8.4	5.6 - 8.0	6.6	6.4	3.6 - 6.0	5.0	5.0
CNDCTVY (MCROMO)	771. - 1419.	1071.	999.	991. - 1427.	1323.	1349.	884. - 1290.	1105.	1104.
PH (STAND UNITS)	8.3 - 8.7	8.4	8.4	8.5 - 9.0	8.8	8.8	8.7 - 8.8	8.7	8.7
TOT ALK (MG/L)	177. - 204.	197.	203.	150. - 172.	163.	165.	152. - 166.	160.	160.
TOT P (MG/L)	0.085 - 0.470	0.152	0.115	0.082 - 0.638	0.192	0.130	0.120 - 0.289	0.165	0.143
ORTHO P (MG/L)	0.005 - 0.048	0.021	0.019	0.008 - 0.105	0.022	0.011	0.008 - 0.060	0.016	0.012
NO2+NO3 (MG/L)	0.030 - 0.460	0.357	0.375	0.020 - 0.050	0.034	0.040	0.020 - 0.060	0.050	0.055
AMMONIA (MG/L)	0.030 - 0.220	0.086	0.080	0.020 - 0.090	0.041	0.040	0.220 - 0.490	0.351	0.310
KJEL N (MG/L)	0.600 - 1.900	0.893	0.800	0.700 - 2.600	1.071	0.900	1.400 - 4.480	2.071	1.800
INORG N (MG/L)	0.080 - 0.660	0.444	0.470	0.050 - 0.130	0.077	0.070	0.240 - 0.550	0.401	0.365
TOTAL N (MG/L)	0.940 - 1.930	1.250	1.160	0.740 - 2.620	1.105	0.940	1.450 - 4.420	2.121	1.860
CHLRPYL A (UG/L)	5.6 - 39.5	13.9	10.1	50.8 - 256.3	106.5	80.5	17.4 - 429.5	95.6	56.6
SECCHI (METERS)	0.1 - 0.2	0.1	0.2	0.3 - 0.3	0.3	0.3	0.2 - 0.4	0.3	0.3

B. Biological Characteristics:

1. Phytoplankton -

Sampling Date	Dominant Genera	Algal Units per ml
05/12/75	1. Chroomonas sp.	1,618
	2. Cryptomonas sp.	917
	3. Schroederia sp.	890
	4. Euglena sp.	405
	5. Pteromonas sp.	216
	Other genera	998
	Total	5,044
08/08/75	1. Anabaena sp.	9,639
	2. Melosira sp.	455
	3. Oscillatoria sp.	342
	4. Chroomonas sp.	304
	5. Cryptomonas sp.	152
	Other genera	151
	Total	11,043
09/19/75	1. Anabaena sp.	6,854
	2. Oscillatoria sp.	219
	3. Cryptomonas sp.	165
	4. Glenodinium sp.	137
	5. Scenedesmus sp.	82
	Other genera	275
	Total	7,732

2. Chlorophyll a -

Sampling Date	Station Number	Chlorophyll a (µg/l)
05/12/75	1	12.8
	2	9.8
	3	5.6
	4	7.0
	5	39.5
	6	9.7
	7	16.7
	8	10.5

Sampling Date	Station Number	Chlorophyll a (ug/l)
08/08/75	1	79.2
	2	112.1
	3	68.6
	4	50.8
	5	256.3
	6	73.0
	7	129.9
	8	81.9
09/19/75	1	59.2
	2	55.1
	3	49.0
	4	67.9
	5	429.5
	6	28.6
	7	58.2
	8	17.4

C. Limiting Nutrient Study:

1. Autoclaved, filtered, and nutrient spiked -

a. Stations 1, 2, 3, and 4 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.035	0.630	6.7
0.050 P	0.085	0.630	21.2
0.050 P + 1.0 N	0.085	1.630	28.1
1.0 N	0.035	1.630	8.1

b. Stations 5, 6, 7, and 8 -

Spike (mg/l)	Ortho P Conc. (mg/l)	Inorganic N Conc. (mg/l)	Maximum yield (mg/l-dry wt.)
Control	0.055	1.005	13.8
0.050 P	0.105	1.005	33.6
0.050 P + 1.0 N	0.105	2.005	42.1
1.0 N	0.055	2.005	18.0

2. Discussion -

The control yields of the assay alga, Selenastrum capricornutum, indicate that the potential primary productivity of Utah Lake was very high at the time the samples were collected (09/19/75). Also, the significant increases in yield when only phosphorus was added indicate phosphorus limitation at that time.

The lake data indicate phosphorus limitation in May and September but nitrogen limitation in August.

Following is a tabulation of the mean inorganic nitrogen/orthophosphorus ratios for each of the sampling stations and times with the indicated limiting nutrient in parentheses.

Station	05/12/75	08/08/75	09/19/75
1	25/1 (P)	4/1 (N)	30/1 (P)
2	22/1 (P)	9/1 (N)	45/1 (P)
3	29/1 (P)	7/1 (N)	48/1 (P)
4	60/1 (P)	7/1 (N)	17/1 (P)
5	2/1 (N)	-	4/1 (N)
6	37/1 (P)	9/1 (N)	45/1 (P)
7	17/1 (P)	5/1 (N)	20/1 (P)
8	13/1 (N-?)	7/1 (N)	40/1 (P)

Note that station 5 in Provo Bay, nearest the major point sources, was strongly nitrogen limited; while the other stations were mostly phosphorus limited.

Nitrogen limitation, as indicated by the algal assay or by in-lake nitrogen to phosphorus ratios, does not necessarily mean that the trophic condition of the lake can be improved

by controlling nitrogen inputs. In many cases, the apparent condition of nitrogen limitation results from excessive phosphorus input from point sources and is often accompanied by a corresponding increase in primary production. In such cases, the reversal of the enriched condition depends upon phosphorus control, not nitrogen control.

IV. NUTRIENT LOADINGS
(See Appendix E for data)

For the determination of nutrient loadings, the Utah National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page v). Sampling was begun in November, 1974, and was completed in October, 1975.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the Utah District Office of the U.S. Geological Survey for the tributary sites nearest the lake.

In this report, nutrient loads for sampled tributaries were calculated using mean annual concentrations and mean annual flows. Nutrient loads shown are those measured minus point-source loads, if any.

Nutrient loads measured in Dry Creek (H-1), Spring Creek (K-1), Spring Creek (41), Unnamed Creek P-1 and Unnamed Creek N-1 were less than the measured point-source loads impacting these streams, and background loads for these tributaries as well as those for the unsampled "minor tributaries and immediate drainage" ("ZZ" of U.S.G.S.) were estimated using the mean concentrations in Unnamed Stream 51 and the mean annual tributary and ZZ flows.

The operators of all of the listed wastewater treatment plants provided monthly effluent samples and corresponding flow data.

A. Waste Sources*:

1. Known municipal -

Name	Pop. Served	Treatment	Mean Flow (m^3/d)	Receiving Water
Payson	5,300	tr. filter	2,769.7	Benjamin Slough
Salem	1,200	tr. filter	1,466.8	Beer Creek
Spanish Fork	7,700	tr. filter & spray irrig.	8,220.6	Dry Creek
Springville	2,700	tr. filter	6,889.4	Spring Creek K-1
Provo	60,000	tr. filter	41,595.3	Mill Race Creek
Springdell	60	none	3,057.1	Provo River
Orem City	33,000	tr. filter	12,980.8	Powell Slough
Lehi City	4,200	tr. filter	2,447.9	Spring Creek 41
Pleasant Grove	6,000	tr. filter	4,239.7	Unnamed Stream X1
American Fork	9,000	tr. filter	12,097.5	Utah Lake
U.S. Steel WWTP	?	tr. filter	55.8	Unnamed Stream X1

2. Known Industrial -

Name	Type Waste	Treatment	Mean Flow (m^3/d)	Receiving Water
Springville St. Fish Hat.	fish rearing	none	19,811.4	Spring Creek K-1
Springville Fed. Fish Hat.	fish rearing	none	46,254.3	Spring Creek K-1
Pacific States Iron	iron pipe mfg.	stab. pond	1,410.1	Spring Creek K-1
Reilly Tar & Chemical	tar & chemical	stab. pond	1,835.9	Spring Creek K-1
U.S. Steel	steel	stab. pond	84,380.1	Unnamed Stream P-1
Lehi Roller Mill	grain processing	none	10.9	Spring Creek 41

* Hopkins, 1975.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	kg P/yr	% of total
a. Tributaries (non-point load) -		
Benjamin Slough	7,225	3.6
Unnamed Canal E-1	795	0.4
Spanish Fork	11,190	5.6
Dry Creek	1,525	0.8
Hobble Creek	1,050	0.5
Spring Creek K-1	905	0.5
Mill Race Creek	13,350	6.6
Provo River	5,820	2.9
Unnamed Stream N-1	1,195	0.6
Unnamed Stream P-1	3,520	1.8
American Fork Creek	30	<0.1
Pleasant Grove Waste Ditch (X-1)	2,225	1.1
Unnamed Stream Y-1	395	0.2
Spring Creek 41	1,885	0.9
Unnamed Stream 51	85	<0.1
Unnamed Stream 61	65	<0.1
Unnamed Stream 71	205	0.1
Current Creek 81	825	0.4
b. Minor tributaries & immediate drainage (non-point load) -	9,320	4.6
c. Known municipal STP's -		
Payson	4,400	2.2
Salem	2,485	1.2
Spanish Fork	10,055	5.0
Springville	6,125	3.0
Provo	39,600	19.6
Springdell	3,030	1.5
Orem City	33,895	16.8
Lehi City	3,720	1.9
Pleasant Grove	5,540	2.8
American Fork	16,835	8.3
U.S. Steel WWTP	15	<0.1
d. Septic tanks - Unknown	?	-

Source	kg P/ yr	% of total
e. Known industrial -		
Springville State Fish Hatch.	880	0.4
Springville Fed. Fish Hatch.	3,185	1.6
Pacific States Iron	65	<0.1
Reilly Tar & Chemical	70	<0.1
U.S. Steel	3,425	1.7
Lehi Roller Mill	20	<0.1
f. Direct precipitation* -	6,940	3.4
Total	201,895	100.0
2. Outputs -		
Lake outlet - Jordan River	139,995	
3. Net annual P accumulation -	61,900 kg.	

* See Working Paper No. 175.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source	kg N/yr	% of total
a. Tributaries (non-point load) -		
Benjamin Slough	96,980	4.2
Unnamed Canal E-1	9,235	0.4
Spanish Fork	89,125	3.8
Dry Creek	34,450	1.5
Hobble Creek	29,750	1.3
Spring Creek K-1	20,505	0.9
Mill Race Creek	34,290	1.5
Provo River	131,475	5.7
Unnamed Stream N-1	27,070	1.2
Unnamed Stream P-1	79,565	3.4
American Fork Creek	1,750	0.1
Pleasant Grove Waste Ditch (X-1)	53,105	2.3
Unnamed Stream Y-1	12,165	0.5
Spring Creek 41	42,655	1.8
Unnamed Stream 51	1,885	0.1
Unnamed Stream 61	940	<0.1
Unnamed Stream 71	15,425	0.7
Current Creek 81	14,230	0.6
b. Minor tributaries & immediate drainage (non-point load) -	210,805	9.1
c. Known municipal STP's -		
Payson	15,415	0.7
Salem	7,825	0.3
Spanish Fork	48,320	2.1
Springville	37,385	1.6
Provo	191,460	8.3
Springdell	24,850	1.1
Orem City	89,745	3.9
Lehi City	13,100	0.6
Pleasant Grove	26,325	1.1
American Fork	68,905	3.0
U.S. Steel WWTP	90	<0.1
d. Septic tanks - Unknown	?	-

Source	kg N/yr	% of total
e. Known industrial -		
Springville State Fish Hatch.	14,340	0.6
Springville Fed. Fish Hatch.	33,545	1.5
Pacific States Iron	1,980	0.1
Reilly Tar & Chemical	1,720	<0.1
U.S. Steel	408,840	17.6
Lehi Roller Mill	145	<0.1
f. Direct precipitation* -	428,170	18.4
Total	2,317,565	100.0
2. Outputs -		
Lake outlet - Jordan River	817,185	
3. Net annual N accumulation -	1,500,300 kg.	

D. Non-point Nutrient Export by Subdrainage Area:

Tributary	kg P/km²/yr	kg N/km²/yr
Benjamin Slough	22	297
Unnamed Canal E-1	64	745
Spanish Fork	6	49
Hobble Creek	4	100
Mill Race Creek	303	779
Provo River	3	74
American Fork Creek	<1	11
Pleasant Grove Waste Ditch (X-1)	23	540
Unnamed Stream Y-1	110	3,379
Unnamed Stream 51	85	1,885
Unnamed Stream 61	36	522
Unnamed Stream 71	205	15,425
Current Creek 81	<1	14

E. Mean Nutrient Concentrations in Ungaged Streams:

Tributary	Mean Total P Conc. (mg/l)	Mean Total N Conc. (mg/l)
Mill Race Creek	0.073	1.234
South Fork	0.026	0.476
Current Creek (82)	0.042	1.331

* See Working Paper No. 175.

F. Yearly Loads:

In the following table, the existing phosphorus loadings are compared to those proposed by Vollenweider (Vollenweider and Dillon, 1974). Essentially, his "dangerous" loading is one at which the receiving water would become eutrophic or remain eutrophic; his "permissible" loading is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic loading would be considered one between "dangerous" and "permissible".

Note that Vollenweider's model may not be applicable to water bodies with short hydraulic retention times.

	Total Phosphorus		Total Nitrogen	
	Total	Accumulated	Total	Accumulated
grams/m^2/yr	0.51	0.16	5.8	3.8

Vollenweider phosphorus loadings ($g/m^2/yr$) based on mean depth and mean hydraulic retention time of Utah Lake:

"Dangerous" (eutrophic loading)	0.18
"Permissible" (oligotrophic loading)	0.09

V. LITERATURE REVIEWED

Anonymous, 1974. Preliminary assessment of water quality conditions in Summit, Utah, and Wasatch counties in the State of Utah. Eyring Res. Inst., Provo.

Bradshaw, J. S., R. B. Sundrud, D. A. White, J. R. Barton, D. K. Fuhriman, E. L. Loveridge, and D. R. Pratt, 1973. Chemical response of Utah Lake to nutrient inflow. Jour. Water Poll. Contr. Fed. 45(5):880-887.

Cruff, Russell, 1976. Personal communication (evaporation loss from Utah Lake). U.S. Geol. Surv., Salt Lake City.

Hopkins, Clyde M., 1975. Personal communication (point sources impacting Utah Lake). UT Bur. of Env. Health, Salt Lake City.

Ketelle, Martha J., and Paul D. Uttormark, 1971. Problem lakes in the United States. EPA Water Poll. Contr. Res. Ser., Proj. 16010 EHR, Wash., DC.

Sudweeks, Calvin K., 1975. Personal communication (lake morphometry). UT Bur. of Env. Health, Salt Lake City.

Tate, William, 1975. Personal communication (disposal of Spanish Fork effluent). UT Bur. of Env. Health, Salt Lake City.

Vollenweider, R. A., and P. J. Dillon, 1974. The application of the phosphorus loading concept to eutrophication research. Natl. Res. Council of Canada Publ. No. 13690, Canada Centre for Inland Waters, Burlington, Ontario.

VI. APPENDICES

APPENDIX A

LAKE RANKINGS

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P
0408	LAKE POWELL	0.010	0.410	339.830	3.081	13.800	0.007
4901	BEAN LAKE	0.011	0.040	253.167	0.945	9.200	0.003
4902	LOWER BOWN'S RESERVOIR	0.031	0.040	336.000	5.567	9.400	0.006
4903	DEER CREEK RESERVOIR	0.038	0.215	430.333	9.078	14.800	0.006
4904	ECHO RESERVOIR	0.047	0.170	450.333	6.967	14.000	0.012
4905	LYNN RESERVOIR	0.121	0.200	417.667	39.600	10.400	0.052
4906	FISH LAKE	0.023	0.040	152.000	12.483	10.400	0.004
4907	HUNTINGTON NORTH RESERVO	0.013	0.040	392.000	1.900	7.800	0.005
4908	JOE'S VALLEY RESERVOIR	0.012	0.045	400.000	2.483	11.200	0.003
4909	MINERSVILLE RESERVOIR	0.192	0.060	445.000	33.583	8.600	0.107
4910	MOON LAKE	0.008	0.040	381.000	2.700	9.600	0.002
4911	NAVAJO LAKE	0.016	0.040	368.000	2.000	6.000	0.003
4912	NEWCASTLE RESERVOIR	0.051	0.040	428.667	12.467	13.600	0.009
4913	OTTER CREEK RESERVOIR	0.067	0.040	453.667	11.767	10.600	0.033
4914	PANGUITCH LAKE	0.071	0.040	426.500	45.950	14.200	0.010
4915	PELICAN LAKE	0.044	0.050	438.500	6.350	8.400	0.004
4916	PINEVIEW RESERVOIR	0.028	0.300	435.083	5.692	14.600	0.006
4917	PIUTE RESERVOIR	0.047	0.150	482.625	25.329	11.600	0.007
4918	PORCUPINE RESERVOIR	0.025	0.110	440.000	7.860	12.400	0.011
4919	PRUESS RESERVOIR (GARRIS	0.057	0.140	491.000	4.533	8.800	0.008
4920	SEVIER BRIDGE RESERVOIR	0.026	0.355	449.778	18.222	12.400	0.008
4921	STARVATION RESERVOIR	0.016	0.040	394.583	5.675	13.200	0.004
4922	STEINAKER RESERVOIR	0.011	0.040	316.750	1.844	12.600	0.005
4923	TROPIC RESERVOIR	0.021	0.050	425.000	7.200	8.400	0.006
4924	UTAH LAKE	0.132	0.320	490.583	72.012	11.400	0.012
4925	WILLARD BAY RESERVOIR	0.044	0.060	457.182	7.567	11.000	0.009
5605	FLAMING GORGE RESERVOIR	0.011	0.690	285.636	2.500	10.400	0.003

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PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P	INDEX NO
0408	LAKE POWELL	96 (25)	4 (1)	81 (21)	73 (19)	15 (4)	42 (11)	311
4901	BEAR LAKE	90 (23)	87 (19)	96 (25)	100 (26)	77 (20)	90 (23)	540
4902	LOWER BOWN'S RESERVOIR	46 (12)	87 (19)	85 (22)	65 (17)	73 (19)	50 (13)	406
4903	DEER CREEK RESERVOIR	42 (11)	19 (5)	42 (11)	35 (9)	0 (0)	58 (14)	196
4904	ECHO RESERVOIR	31 (8)	27 (7)	19 (5)	50 (13)	12 (3)	13 (3)	152
4905	LYNN RESERVOIR	8 (2)	23 (6)	58 (15)	8 (2)	62 (15)	4 (1)	163
4906	FISH LAKE	62 (16)	65 (16)	100 (26)	23 (6)	62 (15)	79 (20)	391
4907	HUNTINGTON NORTH RESERVO	77 (20)	65 (16)	69 (18)	92 (24)	96 (25)	69 (18)	468
4908	JOE'S VALLEY RESERVOIR	81 (21)	58 (15)	62 (16)	85 (22)	46 (12)	96 (25)	428
4909	MINERSVILLE RESERVOIR	0 (0)	44 (11)	27 (7)	12 (3)	85 (22)	0 (0)	168
4910	MOON LAKE	100 (26)	87 (19)	73 (19)	77 (20)	69 (18)	100 (26)	506
4911	NAVAJO LAKE	69 (18)	87 (19)	77 (20)	88 (23)	100 (26)	85 (22)	506
4912	NEWCASTLE RESERVOIR	23 (6)	87 (19)	46 (12)	27 (7)	19 (5)	27 (7)	229
4913	OTTER CREEK RESERVOIR	15 (4)	87 (19)	15 (4)	31 (8)	54 (14)	8 (2)	210
4914	PANGUITCH LAKE	12 (3)	65 (16)	50 (13)	4 (1)	8 (2)	23 (6)	162
4915	PELICAN LAKE	37 (9)	54 (14)	35 (9)	54 (14)	90 (23)	73 (19)	343
4916	PINEVIEW RESERVOIR	50 (13)	15 (4)	38 (10)	58 (15)	4 (1)	58 (14)	223
4917	PIUTE RESERVOIR	27 (7)	31 (8)	8 (2)	15 (4)	38 (10)	46 (12)	165
4918	PORCUPINE RESERVOIR	58 (15)	38 (10)	31 (8)	38 (10)	33 (8)	19 (5)	217
4919	PRUESS RESERVOIR (GARRIS	19 (5)	35 (9)	0 (0)	69 (18)	81 (21)	37 (9)	241
4920	SEVIER BRIDGE RESERVOIR	54 (14)	8 (2)	23 (6)	19 (5)	33 (8)	37 (9)	174
4921	STARVATION RESERVOIR	73 (19)	87 (19)	65 (17)	62 (16)	23 (6)	79 (20)	389
4922	STEINAKER RESERVOIR	85 (22)	87 (19)	88 (23)	96 (25)	27 (7)	65 (17)	448
4923	TROPIC RESERVOIR	65 (17)	50 (13)	54 (14)	46 (12)	90 (23)	58 (14)	363
4924	UTAH LAKE	4 (1)	12 (3)	4 (1)	0 (0)	42 (11)	13 (3)	75
4925	WILLARD BAY RESERVOIR	37 (9)	44 (11)	12 (3)	42 (11)	50 (13)	31 (8)	216
5605	FLAMING GORGE RESERVOIR	90 (23)	0 (0)	92 (24)	81 (21)	62 (15)	90 (23)	415

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
1	4901	BEAR LAKE	(560)
2	4911	NAVAJO LAKE	(506)
3	4910	MOON LAKE	(506)
4	4907	HUNTINGTON NORTH RESERVO	(468
5	4922	STEINAKER RESERVOIR	(448
6	4908	JOE'S VALLEY RESERVOIR	(428
7	5605	FLAMING GORGE RESERVOIR	(415
8	4902	LOWER BOWN'S RESERVOIR	(406
9	4906	FISH LAKE	391
10	4921	STARVATION RESERVOIR	389
11	4923	TROPIC RESERVOIR	363
12	4915	PELICAN LAKE	343
13	0408	LAKE POWELL	311
14	4919	PRUESS RESERVOIR KGARRIS	261
15	4912	NEWCASTLE RESERVOIR	229
16	4916	PINEVIEW RESERVOIR	223
17	4918	PORCUPINE RESERVOIR	217
18	4925	WILLARD BAY RESERVOIR	216
19	4913	OTTER CREEK RESERVOIR	210
20	4903	DEER CREEK RESERVOIR	196
21	4920	SEVIER BRIDGE RESERVOIR	174
22	4909	MINERSVILLE RESERVOIR	168
23	4917	PIUTE RESERVOIR	165
24	4905	LYNN RESERVOIR	163
25	4914	PANGUITCH LAKE	162
26	4904	ECHO RESERVOIR	152
27	4924	UTAH LAKE	75

APPENDIX B

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX C

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR UTAH 10/18/76

LAKE CODE 4924 UTAH LAKE

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 6876.4

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
4924A1	6876.4	3.11	3.40	3.96	6.23	18.12	20.39	22.65	20.10	16.42	6.51	2.83	3.11	10.62
4924D1	326.3	1.27	1.64	2.21	1.67	1.67	1.13	0.57	0.68	1.10	1.30	1.05	1.53	1.32
4924E1	12.4	0.113	0.170	0.142	0.113	0.227	0.227	0.085	0.142	0.085	0.113	0.057	0.113	0.132
4924G1	1813.0	2.379	2.803	3.681	5.663	4.248	0.788	0.113	0.085	0.198	0.934	1.954	2.209	2.075
4924H1	98.4	0.45	0.51	0.71	0.45	0.23	0.42	0.14	0.40	0.40	0.54	0.31	0.51	0.42
4924J1	297.8	0.850	0.765	0.680	1.104	1.048	0.255	0.057	0.057	0.311	0.595	0.821	0.878	0.617
4924K1	24.1	0.28	0.25	0.25	0.37	0.48	0.31	0.31	0.20	0.14	0.11	0.11	0.17	0.25
4924L1	44.0	0.99	1.08	1.44	1.08	1.39	1.47	1.42	1.44	1.27	1.27	0.93	1.08	1.24
4924L2	36.3	0.37	0.40	0.68	0.40	0.45	0.42	0.34	0.37	0.28	0.40	0.28	0.40	0.40
4924M1	1787.1	7.362	7.362	8.212	8.495	8.778	5.947	0.227	0.085	0.283	3.398	6.230	7.362	5.296
4924N1	3.4	0.34	0.34	0.31	0.34	0.31	0.25	0.34	0.34	0.37	0.37	0.34	0.34	0.33
4924P1	24.6	1.02	1.05	1.02	0.96	0.96	0.96	0.82	0.88	0.96	0.96	1.05	1.02	0.97
4924Q1	85.9	0.74	0.71	0.68	0.71	0.93	0.82	0.65	0.68	0.57	0.65	0.45	0.40	0.67
4924W1	163.2	0.008	0.008	0.011	0.011	0.028	0.227	0.057	0.028	0.020	0.025	0.023	0.011	0.038
4924X1	98.4	1.02	1.16	0.74	0.82	0.88	0.57	0.31	0.51	0.68	0.68	0.91	0.79	0.75
4924Y1	3.6	0.057	0.057	0.085	0.085	0.198	0.255	0.142	0.113	0.113	0.113	0.057	0.057	0.111
4924ZZ	815.8	2.55	2.83	3.11	2.83	3.11	3.68	2.27	2.27	1.98	2.27	1.70	2.27	2.57
492441	18.1	0.57	0.51	0.62	0.48	0.57	0.74	0.51	0.28	0.42	0.51	0.48	0.57	0.52
492451	1.0	0.028	0.020	0.020	0.028	0.057	0.028	0.017	0.028	0.011	0.014	0.008	0.011	0.023
492461	1.8	0.008	0.011	0.008	0.006	0.014	0.028	0.008	0.006	0.011	0.003	0.006	0.006	0.010
492471	1.0	0.028	0.028	0.042	0.481	0.623	0.368	0.227	0.227	0.227	0.198	0.028	0.028	0.210
492481	999.7	0.085	0.085	0.085	0.566	0.708	0.566	0.340	0.340	0.340	0.283	0.085	0.085	0.298
492482	797.7	0.028	0.028	0.028	0.028	0.057	0.085	0.057	0.057	0.085	0.028	0.014	0.028	0.044

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 6876.4
SUM OF SUB-DRAINAGE AREAS = 7453.9

TOTAL FLOW IN = 219.88
TOTAL FLOW OUT = 126.86

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4924A1	11	74	1.472	9	1.472				
	12	74	0.651	14	0.538				
	1	75	0.566						
	2	75	7.929						
	3	75	13.026	8	13.026				
	4	75	14.725						
	5	75	18.123	5	12.459	17	12.459		
	6	75	21.238	21	23.503				
	7	75	20.954	22	19.822				
	8	75	22.370						
	9	75	18.972	6	21.804	14	18.689		
	10	75	11.610						

ARMY MISSISSIPPI

TRIBUTARY FLOW INFORMATION FOR UTAH 10/18/76

LAKE CODE 4924 UTAH LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4924D1	11	74	1.019	12	0.481				
	12	74	1.699	14	1.472				
	1	75	1.642	11	1.869				
	2	75	1.557	9	2.662				
	3	75	2.067	8	2.662				
	4	75	1.642	12	2.095				
	5	75	3.115	10	2.379	17	4.531		
	6	75	3.681						
	7	75	1.303	22	1.019				
	8	75	0.396	23	0.793				
	9	75	1.671	20	2.549				
	10	75	2.010	4	0.680				
4924E1	11	74	0.057						
	12	74	0.113						
	1	75	0.113						
	2	75	0.142						
	3	75	0.113						
	4	75	0.085						
	5	75	0.340						
	6	75	0.623						
	7	75	0.198						
	8	75	0.057						
	9	75	0.113						
	10	75	0.142						
4924G1	11	74	2.469	12	2.520				
	12	74	2.625	14	2.294				
	1	75	3.341	11	3.794				
	2	75	2.580	9	2.520				
	3	75	3.200	8	3.370				
	4	75	3.794	12	3.200				
	5	75	12.346	10	5.777				
	6	75	11.695						
	7	75	1.591	22	1.274				
	8	75	0.504	23	0.538				
	9	75	0.767	20	1.161				
	10	75	2.209	4	0.736				
4924H1	11	74	0.425						
	12	74	0.566						
	1	75	0.595						
	2	75	0.510						
	3	75	0.680						
	4	75	0.453						
	5	75	0.425						
	6	75	1.416						
	7	75	0.311						
	8	75	0.227						
	9	75	0.595						
	10	75	0.821						

TRIBUTARY FLOW INFORMATION FOR UTAH 10/18/76

LAKE CODE 4924 UTAH LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4924J1	11	74	0.680	10	0.708				
	12	74	0.934	14	0.850				
	1	75	0.963	11	1.133				
	2	75	0.793	9	0.850				
	3	75	1.189	22	1.416				
	4	75	1.104	15	1.133				
	5	75	2.180						
	6	75	0.991						
	7	75	0.142	17	0.170				
	8	75	0.028						
	9	75	0.396						
	10	75	0.821						
4924K1	11	74	0.085						
	12	74	0.142						
	1	75	0.255						
	2	75	0.227						
	3	75	0.368						
	4	75	0.283						
	5	75	0.793						
	6	75	1.048						
	7	75	0.566						
	8	75	0.085						
	9	75	0.142						
	10	75	0.142						
4924L1	11	74	0.963	10	1.133				
	12	74	1.076	14	1.133				
	1	75	1.076	11	1.133				
	2	75	1.048	9	0.991				
	3	75	1.303	22	1.274				
	4	75	1.048	15	1.019				
	5	75	1.926						
	6	75	2.032						
	7	75	2.039	17	1.812				
	8	75	1.104						
	9	75	1.416						
	10	75	1.501						
4924L2	11	74	0.340	10	0.227				
	12	74	0.425	14	0.481				
	1	75	0.453	11	0.481				
	2	75	0.368	9	0.396				
	3	75	0.595						
	4	75	0.368						
	5	75	0.793						
	6	75	1.359						
	7	75	0.736	17	0.623				
	8	75	0.198						
	9	75	0.396						
	10	75	0.566						

TRIBUTARY FLOW INFORMATION FOR UTAH 10/18/76

LAKE CODE 4924 UTAH LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4924M1	11	74	5.465	10	3.681				
	12	74	10.137	15	11.893				
	1	75	9.175	11	9.401				
	2	75	6.966	8	9.061				
	3	75	4.701	8	3.794				
	4	75	11.165	5	11.213				
	5	75	9.656	3	9.911				
	6	75	30.845	7	35.962	21	37.945		
	7	75	6.739						
	8	75	0.426	10	0.425				
	9	75	1.096	14	1.388				
	10	75	4.955						
4924N1	11	74	0.283	10	0.283				
	12	74	0.311	15	0.340				
	1	75	0.283	11	0.283				
	2	75	0.283	8	0.283				
	3	75	0.255	8	0.283				
	4	75	0.283	5	0.255				
	5	75	0.255	4	0.255				
	6	75	0.227	7	0.283	12	0.283	21	0.283
	7	75	0.283	17	0.227				
	8	75	0.283	10	0.283				
	9	75	0.311						
	10	75	0.311						
4924P1	11	74	1.048						
	12	74	1.076						
	1	75	1.019						
	2	75	0.991						
	3	75	0.991						
	4	75	0.878						
	5	75	1.048						
	6	75	1.388						
	7	75	1.303						
	8	75	1.048						
	9	75	1.274						
	10	75	1.189						
492481	11	74	0.453	10	0.453				
	12	74	0.340	14	0.396				
	1	75	0.311	11	0.340				
	2	75	0.368	8	0.340				
	3	75	0.340	8	0.368				
	4	75	0.368	5	0.311				
	5	75	0.651	3	0.311	17	0.651		
	6	75	0.934	7	0.963	21	0.708		
	7	75	0.566	12	0.481				
	8	75	0.481	16	0.425				
	9	75	0.510	13	0.566				
	10	75	0.680	5	0.651				

TRIBUTARY FLOW INFORMATION FOR UTAH 10/18/76

LAKE CODE 4924 UTAH LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
4924W1	11	74	0.017	13	0.020				
	12	74	0.011	14	0.011				
	1	75	0.008	11	0.008				
	2	75	0.008	8	0.006				
	3	75	0.006						
	4	75	0.003						
	5	75	0.023	3	0.006	17	0.028		
	6	75	0.198	7	0.198	21	0.142		
	7	75	0.170	12	0.198				
	8	75	0.113	16	0.085				
	9	75	0.085	13	0.085				
	10	75	0.028	5	0.028				
4924X1	11	74	0.850	13	0.850				
	12	74	0.538	14	0.595				
	1	75	0.510	11	0.538				
	2	75	0.623	8	0.595				
	3	75	0.510	8	0.510				
	4	75	0.481	5	0.453				
	5	75	0.566	3	0.481	17	0.538		
	6	75	0.963	7	0.850	21	1.104		
	7	75	0.821	12	0.793				
	8	75	0.991	16	0.850				
	9	75	0.878	13	0.963				
	10	75	1.019	5	0.991				
4924Y1	11	74	0.057						
	12	74	0.057						
	1	75	0.057						
	2	75	0.042						
	3	75	0.057						
	4	75	0.057						
	5	75	0.283						
	6	75	0.623						
	7	75	0.283						
	8	75	0.057						
	9	75	0.142						
	10	75	0.142						
4924ZZ	11	74	1.699						
	12	74	2.265						
	1	75	3.115						
	2	75	2.549						
	3	75	2.549						
	4	75	1.982						
	5	75	5.947						
	6	75	10.477						
	7	75	4.814						
	8	75	1.133						
	9	75	2.832						
	10	75	3.398						

TRIBUTARY FLOW INFORMATION FOR UTAH 10/18/76

LAKE CODE 4924 UTAH LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
492441	11	74	0.963	13	0.963				
	12	74	0.595	14	0.651				
	1	75	0.651	11	0.680				
	2	75	0.453	8	0.453				
	3	75	0.510	15	0.510				
	4	75	0.425	5	0.340				
	5	75	0.934	3	0.566	17	1.331		
	6	75	2.124	13	1.416	22	1.444		
	7	75	1.501	14	1.671	26	1.303		
	8	75	1.161	9	1.274	23	1.133		
	9	75	0.991	16	1.218				
	10	75	1.359	8	1.303				
492451	11	74	0.008						
	12	74	0.011						
	1	75	0.028						
	2	75	0.017						
	3	75	0.017						
	4	75	0.028						
	5	75	0.085						
	6	75	0.085						
	7	75	0.028						
	8	75	0.011						
	9	75	0.017						
	10	75	0.020						
492461	11	74	0.014						
	12	74	0.028						
	1	75	0.028						
	2	75	0.023						
	3	75	0.028						
	4	75	0.023						
	5	75	0.085						
	6	75	0.198						
	7	75	0.113						
	8	75	0.028						
	9	75	0.113						
	10	75	0.028						
492471	11	74	0.006						
	12	74	0.006						
	1	75	0.008						
	2	75	0.008						
	3	75	0.006						
	4	75	0.006						
	5	75	0.020						
	6	75	0.085						
	7	75	0.017						
	8	75	0.003						
	9	75	0.014						
	10	75	0.003						

TRIBUTARY FLOW INFORMATION FOR UTAH 10/18/76

LAKE CODE 4924 UTAH LAKE

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
492481	11	74	0.057						
	12	74	0.057						
	1	75	0.057						
	2	75	0.057						
	3	75	0.057						
	4	75	0.057						
	5	75	0.227						
	6	75	0.850						
	7	75	0.821						
	8	75	0.680						
	9	75	0.510						
	10	75	0.085						
492482	11	74	0.085						
	12	74	0.085						
	1	75	0.085						
	2	75	0.085						
	3	75	0.085						
	4	75	0.057						
	5	75	0.453						
	6	75	1.189						
	7	75	0.991						
	8	75	0.821						
	9	75	0.623						
	10	75	0.142						

APPENDIX D

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 76/08/12

492401
40 21 03.0 111 53 11.0 3
UTAH LAKE
49049 UTAH

150791

11EPALES 21112C2
0008 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/05/12	16	30 0000	13.8	8.2	3	1393	8.40	203	0.080	0.700	0.460	0.017
	16	30 0005	13.8	8.2		1419	8.40	203	0.070	0.700	0.460	0.025
75/08/08	08	50 0000	19.2	6.8	12	1333	8.80	170	0.030	0.800	0.020K	0.011
	08	50 0004	19.0	7.2		1333	8.70	170	0.030	1.000	0.020K	0.012
75/09/19	08	15 0000	17.8	5.4	9	1100	8.70	166	0.320	1.500	0.060	0.013
	08	15 0005	17.7	6.0		1100	8.70	164	0.300	1.600	0.050	0.011

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/05/12	16	30 0000	0.169	12.8	
	16	30 0005	0.176		
75/08/08	08	50 0000	0.130	79.2	
	08	50 0004	0.189		
75/09/19	08	15 0000	0.289	59.2	
	08	15 0005	0.120		

K VALUE KNOWN TO BE
LESS THAN INDICATED

35

STORET RETRIEVAL DATE 75/08/12

492402
40 19 23.0 111 46 37.0 3
UTAH LAKE
49049 UTAH

150791

11EPALES 2111202
0008 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/05/13	09	15 0000	12.3	8.0	6	975	8.30	204	0.220	1.300	0.440	0.030
	09	15 0005	12.3	8.2		975	8.30	203	0.160	0.900	0.400	0.022
75/08/08	09	10 0000	20.9	6.4	12	1345	8.70	152	0.020K	0.800	0.050	0.010
	09	10 0005	20.8	6.0		1352	8.70	150	0.060	1.000	0.040	0.010
75/09/19	08	55 0000	18.6	5.0	10	1104	8.70	166	0.430	1.600	0.060	0.010
	08	55 0005	18.6	5.0		1081	8.70	164	0.440	1.800	0.060	0.012

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/05/13	09	15 0000	0.117	9.8	
	09	15 0005	0.115		
75/08/08	09	10 0000	0.167	112.1	
	09	10 0005	0.149		
75/09/19	08	55 0000	0.135	55.1	
	08	55 0005	0.176		

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 75/08/12

492403
40 16 03.0 111 50 00.0 3
UTAH LAKE
49049 UTAH

150791

11EPALES 2111202
0009 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/05/13	09 40	0000	11.1	8.6	8	960	8.30	203	0.100	0.800	0.380	0.011
	09 40	0005	10.9	8.6		960	8.40	202	0.090	0.700	0.370	0.021
75/08/08	08 30	0000	18.4	7.0	12	1324	8.70	169	0.030	0.700	0.040	0.009
	08 30	0005	18.4	7.0		1320	8.80	168	0.030	0.900	0.040	0.010
75/09/19	09 10	0000	18.4	5.0	10	1106	8.70	152	0.490	2.200	0.050	0.009
	09 10	0006	18.3	4.4		1104	8.70	153	0.470	2.300	0.040	0.013

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/05/13	09 40	0000	0.089	5.6	
	09 40	0005	0.088		
75/08/08	08 30	0000	0.098	68.6	
	08 30	0005	0.085		
75/09/19	09 10	0000	0.137	49.0	
	09 10	0006	0.158		

37

STORET RETRIEVAL DATE 76/08/12

492404
40 14 37.0 111 45 00.0 3
UTAH LAKE
49049 UTAH

150791

11EPALES 2111202
0011 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/05/13	10	00 0000	11.6	8.4	7	994	8.40	201	0.080	0.800	0.400	0.011
	10	00 0007	11.3	8.4		987	8.40	202	0.090	0.800	0.400	0.005
75/08/08	08	15 0000	19.5	8.0	12	1394	8.80	162	0.040	0.800	0.040	0.012
	08	15 0006	19.4	6.8		1344	8.80	163	0.040	0.800	0.040	0.010
	09	10 0000						152	0.020K	0.800	0.050	0.010
75/09/19	09	25 0000	18.2	6.0	10	1114	8.70	156	0.260	1.800	0.060	0.011
	09	25 0007	18.2	3.6		1114	8.70	155	0.260	1.900	0.060	0.027

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/05/13	10	00 0000	0.103	7.0	
	10	00 0007	0.085		
75/08/08	08	15 0000	0.154	50.8	
	08	15 0006	0.126		
	09	10 0000	0.167		
75/09/19	09	25 0000	0.130	67.9	
	09	25 0007	0.132		

K VALUE KNOWN TO BE LESS THAN INDICATED

IORET RETRIEVAL DATE 76/08/12

492405
40 11 18.0 111 41 10.0 3
UTAH LAKE
49049 UTAH

150791

11EPALES 2111202
0005 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/05/12	14	25 0000	15.2	7.4	4	771	8.70	187	0.050	1.900	0.030	0.048
75/08/08	07	20 0000	17.5	6.0	12	991	9.00	158		2.300	0.020	0.103
	07	20 0004	17.6	6.0		993	9.00	159		2.600	0.020	0.105
75/09/19	10	35 0000	16.4	6.0	17	884	8.70	162	0.220	4.400	0.020	0.060

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/05/12	14	25 0000	0.470	39.5	
75/08/08	07	20 0000	0.620	256.3	
	07	20 0004	0.638		
75/09/19	10	35 0000	0.273	429.5	

STORET RETRIEVAL DATE 75/04/12

492406
40 12 23.0 111 48 14.0 3
UTAH LAKE
49049 UTAH

150791

11EPALES 2111202
0011 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/05/13	10 20 0000		12.2	8.6	6	1009	8.40	203	0.080	0.800	0.360	0.011
	10 20 0007		11.8	8.6		1004	8.40	204	0.090	0.800	0.360	0.013
75/08/08	09 20 0000		20.2	7.2	12	1397	8.80	160	0.060	0.800	0.030	0.011
	09 20 0007		19.9	6.4		1411	8.80	165	0.050	0.800	0.040	0.008
75/09/19	11 00 0000		18.9	4.6	10	1104	8.80	161	0.460	1.400	0.060	0.013
	11 00 0007		18.6	4.2		1104	8.70	159	0.490	1.900	0.060	0.012

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/05/13	10 20 0000		0.102	9.7	
	10 20 0007		0.115		
75/08/08	09 20 0000		0.120	73.0	
	09 20 0007		0.082		
75/09/19	11 00 0000		0.143	28.6	
	11 00 0007		0.165		

RETRIEVAL DATE 75/08/12

492407
40 03 53.0 111 52 46.0 3
UTAH LAKE
49049 UTAH

150791

11EPALES -2111202
0006 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/05/12	14 55	0000	13.8	8.4	6	1309	8.45	182	0.030	0.900	0.260	0.017
75/08/08	07 40	0000	19.5	6.0	12	1422	8.80	168	0.090	1.000	0.040	0.023
	07 40	0003	19.7	5.6		1427	8.60	166	0.040	1.000	0.030	0.016
75/09/19	10 05	0000	18.4	3.8	8	1290	8.70	165	0.220	3.600	0.020	0.012

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMNING PERCENT
75/05/12	14 55	0000	0.115	16.7	
75/08/08	07 40	0000	0.189	129.9	
	07 40	0003	0.167		
75/09/19	10 05	0000	0.193	58.2	

STORET RETRIEVAL DATE 76/08/12

492408
40 10 16.0 111 53 33.0 3
UTAH LAKE
49049 UTAH

150791

11EPALES 2111202
0010 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
75/05/12	15 05	0000	12.7	8.8	7	1121	8.50	178	0.030	0.800	0.340	0.027
	15 05	0006	12.7	8.8		1121	8.50	177	0.040	0.600	0.340	0.034
75/08/08	07 50	0000	19.7	6.4	12	1395	8.50	172	0.040	1.000	0.030	0.011
	07 50	0006	19.7	6.4		1386	8.80	167	0.040	1.100	0.030	0.010
75/09/19	09 45	0000	18.6	5.8	9	1135	8.80	159	0.260	1.600	0.050	0.008
	09 45	0006	18.5	5.6		1125	8.70	157	0.290	1.400	0.050	0.009

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L	00031 INCDT LT REMAINING PERCENT
75/05/12	15 05	0000	0.128	10.5	
	15 05	0006	0.262		
75/08/08	07 50	0000	0.126	81.9	
	07 50	0006	0.129		
75/09/19	09 45	0000	0.121	17.4	
	09 45	0006	0.144		

APPENDIX E

TRIBUTARY AND WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 76/08/12

4924A1
40 21 39.0 111 53 52.0 4
JORDAN RIVER
49 7.5 SARATOGA SPS
0/UTAH LAKE 150791
HWY 121 BRDG 3.6 MI SW OF LEHI
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/09	11 00		0.416	1.700	0.030	0.035	0.120
74/12/14	09 30		0.384	1.100	0.110	0.025	0.070
75/03/08	10 00		0.268	2.100	0.040	0.024	0.110
75/05/05	08 00		0.260	1.680	0.480	0.040	0.150
75/05/17	08 00		0.640	1.600	0.045	0.015	0.130
75/06/21	09 00		0.390	1.200	0.170	0.060	0.150
75/07/22	09 00		1.700	1.870	0.320	0.600	1.000
75/09/06	08 30		0.045	3.000	0.055	0.050	0.230
75/09/14	11 30		0.005	3.600	0.040	0.850	1.800

STORET RETRIEVAL DATE 76/08/12

492401
40 08 15.0 111 47 55.0 4
BENJAMIN SLOUGH
49 7.5 LINCOLN PT
T/UTAH LAKE 150791
BNK 100 FT W END OF DRT RD 6 M SE LN PT
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/12	11 45		1.560	1.050	0.145	0.240	0.330
74/12/14	15 00		1.760	0.900	0.160	0.160	0.295
75/01/11	14 30		1.840	3.600	0.460	0.270	0.460
75/02/09	14 30		1.300	2.600	0.480	0.200	0.400
75/03/08	14 30		1.200	2.300	0.092	0.120	0.500
75/04/12	13 45		1.200	1.150	0.155	0.175	0.310
75/05/10	12 45		1.200	2.500	0.135	0.175	0.275
75/07/22	10 30		0.020	0.500	0.150	0.195	0.358
75/08/23	08 30		0.690	2.500	0.070	0.060	0.160
75/09/20	09 50		1.050	0.900	0.140	0.230	0.320
75/10/04	11 55		1.050	0.900	0.135	0.230	0.320

54

STORET RETRIEVAL DATE 76/08/12

4924E1
40 08 10.0 111 44 55.0 4
UNNAMED CANAL
49 7.5 PROVO
T/UTAH LAKE 150791
SEC RD BRDG 3.2 MI W OF PALMYRA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/12	12 35		0.704	1.100	0.067	0.057	0.100
74/12/14	14 15		0.624	1.500	0.250	0.095	0.200
75/01/11	14 00		0.640	1.800	0.260	0.080	0.210
75/02/09	14 00		0.510	1.400	0.284	0.160	0.270
75/03/08	14 00		0.300	1.750	0.144	0.060	0.130
75/04/12	13 30		0.250	2.400	0.110	0.115	0.330
75/05/10	12 30		0.200	1.650	0.060	0.030	0.110
75/07/22	10 00		1.000	0.400	0.050	0.050	0.248
75/08/23	09 00		0.680	1.930	0.045	0.055	0.150
75/09/20	09 50		0.740	2.400	0.030	0.070	0.180
75/10/04	11 40		0.720	1.700	0.110	0.070	0.170

STORET RETRIEVAL DATE 76/08/12

492461
40 09 55.0 111 44 05.0 4
SPANISH FORK (W BRANCH)
49 7.5 PROVO
T/UTAH LAKE 150791
BNK JUST W OF SEC RD 3 MI N OF PALMYRA
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/12	13 00		0.384	0.400	0.030	0.010	0.110
74/12/14	13 55		0.432	0.400	0.040	0.010	0.110
75/01/11	13 30		0.504	1.800	0.060	0.010	0.130
75/02/09	13 30		0.384	0.600	0.056	0.008	0.100
75/03/08	13 30		0.351	1.400	0.048	0.016	0.200
75/04/12	13 15		0.270	1.000	0.030	0.015	0.140
75/05/10	12 15		0.290	1.300	0.025	0.030	0.480
75/07/22	09 30		0.460	0.400	0.145	0.040	0.119
75/08/23	08 20		0.430	1.900	0.110	0.040	0.280
75/09/20	09 15		0.410	0.300	0.075	0.015	0.100
75/10/04	11 15		0.420	1.150	0.070	0.015	0.107

STORET RETRIEVAL DATE 76/08/12

492441
40 09 32.0 111 39 47.0 4
DRY CREEK
49 7.5 PROVO
T/UTAH LAKE 150791
SEC RD BRDG 1 MI N OF SPAN FORK AIRPORT
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/12	13	20	3.600	2.300	0.650	0.500	0.750
74/12/14	13	15	4.100	3.500	0.500	0.520	0.840
75/01/11	13	00	3.520	3.400	0.620	0.510	0.840
75/02/09	13	00	2.800	2.500	0.624	0.552	0.980
75/03/08	13	00	3.350	3.300	0.790	0.622	0.870
75/04/12	13	00	3.100	3.080	0.470	0.770	0.935
75/04/15	15	00	0.735	3.900	1.200	0.625	0.870
75/05/10	12	00	2.700	3.500	0.575	0.620	0.750
75/08/23	08	15	2.800	1.700	0.145	0.315	0.460
75/09/20	09	00	2.500	1.700	0.140	0.210	0.460
75/10/04	11	00	2.500	2.000	0.135	0.210	0.440

STORET RETRIEVAL DATE 76/08/12

4924J1
40 11 02.0 111 38 45.0 4
HOBBLE CREEK
49 7.5 PROVO
T/UTAH LAKE 150791
I15 BRDG 3 MI S OF PROVO
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/10	13 00		0.920	0.200	0.025	0.010	0.020
74/12/14			0.736	1.300	0.080	0.030	0.050
75/01/11	11 00		0.760	0.100	0.024	0.030	0.030
75/02/09	12 00		0.700	0.300	0.080	0.035	0.050
75/03/22			0.715	1.100	0.018	0.018	0.030
75/04/15	15 00		0.720	1.600	0.195	0.100	0.150
75/07/17	15 30		1.050	0.500	0.060	0.020	0.050

STORET RETRIEVAL DATE 76/08/12

4924K1
40 11 30.0 111 38 14.0 4
SPRING CREEK
49 7.5 PROVO
T/UTAH LAKE 150791
UN-PAC RR XING 1.7 MI SE OF GOLF COURSE
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/10	12	20	1.760	1.700	0.550	0.700	0.830
74/12/14			0.885	6.800	2.000	0.990	2.400
75/01/11	12	00	0.640	13.800	6.360	1.880	3.000
75/02/09	12	00	0.758	4.100		0.624	0.980
75/03/22			0.725	0.950	0.018		
75/04/15	09	00	0.735	3.900	1.230	0.600	0.823

25

STORET RETRIEVAL DATE 76/08/12

4924L1
40 12 11.0 111 39 16.0 4
MILL RACE CREEK
49 7.5 PROVO
T/UTAH LAKE 150791
115 BRDG 2 MI S OF PROVO COURTHOUSE
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/10	13 30		1.200	5.300		1.150	1.650
74/12/14	12 04		0.880	5.000L	4.650	0.300	0.450
75/01/11	12 00		0.890	8.650	5.920	1.500	2.355
75/02/09	12 00		0.840	8.600	4.400	1.200	1.680
75/03/22			0.720	0.550	0.018		
75/04/15	15 00		0.735	3.750	1.050	0.620	0.810
75/07/17	15 00		1.400	4.900	2.300	1.100	1.780
	15 45		0.870	1.900	0.230	0.610	0.750

L ACTUAL VALUE IS KNOWN TO BE
GREATER THAN VALUE GIVEN

STORET RETRIEVAL DATE 76/08/12

4924L2
40 13 20.0 111 39 30.0 4
MILL RACE CREEK
49 7.5 PROVO
T/UTAH LAKE 150791
RT 189 BRDG .7 MI S OF PROVO COURTHOUSE
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/10	11	00	0.800	0.300	0.025	0.020	0.050
74/12/14	12	00	0.697	0.500	0.055	0.025	0.080
75/01/11	12	00	0.768	0.340	0.032	0.025	0.026
75/02/09	12	00	0.736	0.300	0.060	0.035	0.040
75/07/17	14	30	0.630	1.100	0.330	0.070	0.170

STORET RETRIEVAL DATE 76/08/12

4924M1
40 14 12.0 111 44 00.0 4
PROVO RIVER
49 7.5 PROVO
T/UTAH LAKE 150791
SEC RD BRDG 4.2 MI E OF PROVO COURTHOUSE
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/10	11 00		0.352	0.200	0.030	0.015	0.020
74/12/15	12 50		0.480	0.500	0.065	0.015	0.040
75/01/11	09 30		0.504	0.300	0.024	0.020	0.040
75/02/08	09 45		0.480	0.200	0.016	0.016	0.030
75/03/08	10 00		0.320	0.400	0.040	0.021	0.025
75/04/05	08 00		0.500	0.600	0.030	0.030	0.040
75/05/03	11 30		0.350	0.300	0.040	0.010	0.030
75/06/07	09 15		0.300	0.450	0.055	0.030	0.100
75/06/21	07 00		0.270	0.600	0.035	0.020	0.090
75/08/10	12 45		0.005	3.100	0.115	0.030	0.130
75/09/14	12 00		0.260	0.200	0.035	0.025	0.060
75/10/05	12 45		0.240	0.400	0.030	0.020	0.030

STORET RETRIEVAL DATE 76/08/12

4924N1
40 15 56.0 111 44 21.0 4
UNNAMED CREEK
49 7.5 OREM
T/UTAH LAKE 150791
ORT RD BRDG 3 MI S OF GENEVA STEEL PLANT
11EPALES 2111204
0000 FEET—DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/10	12 00		0.940	4.650	3.940	2.300	3.000
74/12/15	13 00		0.768	6.600	3.500	1.720	2.400
75/01/11	09 45		0.650	6.800	4.100	2.300	2.700
75/02/08	14 00		0.352	6.600	3.400	1.800	2.400
75/03/08	13 30		0.200	7.300	2.420	2.460	
75/04/05	08 40		0.425	5.200	1.800	1.700	1.700
75/05/04	12 00		0.320	2.900	0.150	0.103	0.600
75/06/07	07 45		0.180	2.100	0.100	0.170	0.400
75/06/12	10 00		0.400	0.225	0.063		
75/06/21	08 30		0.010	2.200	0.022	0.505	0.750
75/07/12	15 30		0.010	2.700	0.060	1.300	1.700
75/08/10	13 00		0.005	6.000	0.065	0.560	1.150
75/10/05	13 00		0.010	4.800	0.025	1.200	2.200

5-4

STORET RETRIEVAL DATE 76/08/12

4924P1
40 18 42.0 111 46 00.0 4
UNNAMED CREEK
49 7.5 PELICAN PT
T/UTAH LAKE 150791
SEC RD BRDG 1.5 MI W OF GENEVA STEEL PLT
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/10	12 30		0.800	2.000	0.133	0.015	0.020
74/12/16	14 00		0.700	0.800	0.380	0.012	0.015
75/01/11	10 00		0.416	1.600	0.210	0.030	0.030
75/02/08	10 00		0.448	1.200	0.430	0.015	0.050
75/03/08	10 30		0.495	0.989	0.190	0.015	0.070
75/04/05	09 20		0.360	1.000	0.075	0.020	0.050
75/05/03	12 30		0.185	0.600	0.070	0.015	0.060
75/06/07	08 30		0.200	0.900	0.200	0.025	0.090
75/06/21	09 00		0.300	1.000	0.195	0.025	0.080
75/07/12	15 15		0.050	1.600	0.775	0.085	0.110
75/08/10	13 45		0.240	1.150	0.315	0.040	0.130
75/09/14	11 00		0.210	0.700	0.118	0.030	0.070
75/10/05	13 30		0.430	0.700	0.050	0.015	0.060

55

STORET RETRIEVAL DATE 76/08/12

492401
40 21 10.0 111 34 10.0 4
SOUTH FORK
49 7.5 BRDL VEIL FL
T/UTAH LAKE 150791
GAGING STATION JUST OFF LGHT DTY RD
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/10	09 00		0.240	0.100K	0.017	0.010	0.010
74/12/14	09 30		0.272	0.600	0.025	0.010	0.010
75/01/11	10 00		0.264	0.100K	0.016	0.015	0.020
75/02/08	09 00		0.264	0.050K	0.045	0.015	0.015
75/03/08			0.292	0.150	0.015	0.015	0.030
75/04/05	09 00		0.270	0.100	0.035	0.015	0.015
75/05/03	09 00		0.260	0.050K	0.010	0.005	0.010
75/05/17	11 00		0.330	0.450	0.005	0.020	0.090
75/06/07	09 15		0.300	0.450	0.015	0.020	0.025
75/06/21	09 30		0.300	0.350	0.020	0.015	0.015
75/07/12	11 00		0.250	0.050K	0.014	0.015	0.020
75/08/16	09 15		0.315	0.100K	0.005K	0.020	0.030
75/09/13	13 00		0.210	0.200	0.025	0.015	0.050
75/10/05	09 00		0.250	0.100K	0.005K	0.015	0.030

K VALUE KNOWN TO BE
LESS THAN INDICATED

95

STORET RETRIEVAL DATE 76/08/12

4924W1
40 20 36.0 112 48 05.0 4
AMERICAN FORK CREEK
49 7.5 PELICAN PT
T/UTAH LAKE 150791
SEC RD BRDG 2.5 MI S OF AMERICAN FORK
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/13	14	50	1.400	0.400	0.055	0.005	0.010K
74/12/14	12	15	1.360	0.300	0.065	0.010	0.020
75/05/03	11	45	0.440	0.350	0.145	0.010	0.030
75/05/17			0.570	0.750	0.045	0.005	0.030
75/06/07	10	40	0.250	1.000	0.015	0.010	
75/06/21	11	00	0.375	0.100	0.010	0.005	0.030
75/07/12	12	00	0.260	0.050K	0.030	0.005	0.020
75/08/16	10	15	2.100	0.200	0.007	0.005	0.020
75/09/13	14	30	1.720	0.700	0.040	0.005	0.040
75/10/05	11	30	2.100	0.200	0.017	0.005K	0.020

K VALUE KNOWN TO BE LESS THAN INDICATED

57

STORET RETRIEVAL DATE 76/08/12

4924A1
40 20 00.0 111 45 31.0 4
PLEASANT GROVE WASTE DITCH
49 7.5 PELICAN PT
T/UTAH LAKE 150791
SEC RD BRDG 3 MI SE OF AMERICAN FORK
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/13	12 00		2.880	0.800	0.210	0.120	0.160
74/12/14	11 45		2.900	0.900	0.175	0.200	0.350
75/01/11	12 30		2.880	1.400	0.248	0.210	0.370
75/02/08	10 30		0.175	0.700	0.220	0.204	0.280
75/03/08			2.755	0.750	0.208	0.228	0.240
75/04/05	10 00		2.900	0.900	0.220	0.320	0.350
75/05/03	10 20		2.500	0.850	0.175	0.270	0.340
75/05/17			2.200	1.430	0.145		0.470
75/06/07	09 50		2.600	1.300	0.090	0.210	0.520
75/06/21	10 30		1.800	0.950	0.100	0.120	0.330
75/07/12	11 30		2.100	1.000	0.143	0.160	0.360
75/08/16	09 15		2.500	0.800	0.030	0.135	0.270
75/09/13	14 00		2.700	1.000	0.185	0.195	0.370
75/10/05	10 00		2.600	0.800	0.105	0.105	0.190

STORET RETRIEVAL DATE 76/08/12

4924Y1
40 20 50.0 111 46 37.0 4
UNNAMED STREAM
49 7.5 PELICAN PT
T/UTAH LAKE 150791
SEC RD CLVRT 2 MI SE OF AMERICAN FORK
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/12/14	12 00		2.400	0.600	0.095	0.025	0.090
75/01/11	12 00		2.400	1.400	0.190	0.030	0.175
75/02/08	11 00		2.630	0.800	0.224	0.016	0.090
75/03/08			2.665	0.800	0.176	0.028	0.110
75/04/05	10 30		2.750	0.900	0.140	0.106	0.130
75/05/03	11 30		2.600	0.850	0.090	0.040	0.200
75/05/17			2.400	1.300	0.180	0.140	0.180
75/06/07	10 00		3.300	0.850	0.085		0.100
75/06/21	10 45		2.500	0.700	0.035	0.020	0.070
75/07/12	11 45		2.880	0.300	0.030	0.010	0.040
75/08/16	10 15		2.900	0.500	0.015	0.015	0.080
75/09/13	14 00		2.750	0.500	0.027	0.015	0.110
75/10/05	11 00		2.600	0.900	0.020	0.005	0.090

ORET RETRIEVAL DATE 76/08/12

492441
40 22 07.0 111 50 10.0 4
SPRING CREEK
49 7.5 PELICAN PT
T/UTAH LAKE 150791
SEC RD CLVRT 1.4 MI W OF AMERICAN FORK
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/12/14	10 00		2.000	0.300	0.060	0.010	0.030
75/01/11	09 55		1.920	0.600	0.210	0.005	0.040
75/02/08	09 21		1.780	1.500	0.336	0.012	0.070
75/03/15	10 20		0.048	1.000	0.024	0.008K	0.070
75/04/05	14 00		1.700	0.450	0.060	0.010	0.040
75/05/03	13 00		1.350	0.450	0.070	0.005	0.050
75/05/17	17 00		1.200	0.450	0.025	0.005K	0.050
75/06/13	08 10		1.100	0.650	0.085	0.010	0.080
75/06/22	11 00		1.350	0.300	0.035	0.010	0.030
75/07/14	16 40		0.225	0.700	0.065	0.015	0.050
75/07/26	17 00		1.570	0.700	0.123	0.010	0.030
75/08/09	16 00		1.600	0.650	0.075	0.020	0.030
75/08/23	15 00		1.600	0.300	0.030	0.010	0.030
75/09/16	09 00		1.500	0.400	0.010	0.005	0.030
75/10/08	17 00		1.570	0.400	0.015	0.005	0.040

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

492451
40 21 52.0 111 50 55.0 4
UNNAMED STREAM
49 7.5 PELICAN PT
T/UTAH LAKE 150791
SEC RD CLVRT 2.2 MI W OF AMERICAN FORK
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/13	13 20		1.360	0.500	0.060	0.095	0.130
74/12/14	10 15		2.000	0.800	0.055	0.020	0.040
75/01/11	11 30		2.520	1.800	0.150	0.020	0.050
75/02/08	09 30		1.380	1.500	0.152	0.100	0.150
75/03/15	10 30		*.585	0.400	0.048	0.016	0.040
75/04/05	14 10		0.890	0.800	0.070	0.020	0.040
75/05/05	13 05		0.750	1.650	0.125	0.040	0.160
75/05/18	09 30		0.890	0.700	0.065	0.005	0.090
75/06/13	08 25		0.180	1.400	0.095	0.045	0.280
75/06/22	11 00		0.820	1.300	0.100	0.040	0.070
75/07/14	16 50		1.500	0.950	0.060	0.040	0.080
75/07/26	17 00		2.800	1.100	0.130	0.030	0.110
75/08/09	16 00		2.750	1.250	0.110	0.145	0.220
75/08/23	15 00		1.570	1.575	0.360	0.055	0.287
75/09/16	09 00		2.200	0.400	0.055	0.015	0.040
75/10/08	17 00		1.400	0.900	0.150	0.040	0.060

STORET RETRIEVAL DATE 76/08/12

492461
40 21 52.0 111 51 22.0 4
UNNAMED STREAM
49 7.5 PELICAN PT
T/UTAH LAKE 150791
BNK OFF SEC RD 2 MI S OF LEHI
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/13	16	15	1.680	1.200	0.050	0.030	0.190
74/12/14	10	30	1.920	1.700	0.143	0.035	0.170
75/01/11	11	35	1.840	1.600	0.100	0.035	0.090
75/02/08	09	36	1.390	2.000	0.384	0.368	0.480
75/03/15	10	35	1.200	0.900	0.056	0.028	0.230
75/04/05	14	15	1.720	0.750	0.080	0.055	0.150
75/05/05	13	10	1.720	1.300	0.260	0.170	0.280
75/05/17	17	00	0.860	2.300	0.015	0.055	0.630
75/06/13	08	35	1.650	1.700	0.045	0.050	0.339
75/06/22	11	15	1.700	0.900	0.050	0.030	0.100
75/07/14	17	00	2.200	0.950	0.050	0.055	0.110
75/07/26	17	00	2.500	0.650	0.055	0.040	0.090
75/08/09	16	00	2.500	0.650	0.090	0.040	0.080
75/08/23	15	00	1.950	0.700	0.110	0.045	0.080
75/09/16	09	00	2.300	0.500	0.075	0.045	
75/10/08	17	00	1.950	0.800	0.085	0.017	0.040

STORET RETRIEVAL DATE 76/08/12

492471
40 51 52.0 111 52 12.0 4
UNNAMED STREAM
49 7.5 PELICAN PT
T/UTAH LAKE 150791
SEC RD CLVRT 1.5 MI SW OF LEHI
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/13	16	00	1.520	1.500	0.040	0.005K	0.050
74/12/14	09	30	1.480	0.300	0.030	0.005	0.030
75/03/08	10	00	1.510	1.500	0.040	0.008K	0.020
75/05/05	08	00	1.570	1.150		0.005	0.030
75/05/17	08	00	1.450	0.300	0.012	0.005K	0.030
75/06/21	09	00	0.920	1.050	0.025	0.005	0.010
75/09/06	08	30	1.450	0.600	0.070	0.005	0.050

K VALUE KNOWN TO BE
LESS THAN INDICATED

63

STORET RETRIEVAL DATE 76/08/12

492481
39 57 10.0 111 56 00.0 4
CURRENT CREEK
49 15 SANTAQUIN
T/UTAH LAKE 150792
US RT 6 BRDG 1.5 MI W OF GOSHEN
11EPALES 2111204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/13	14 30		0.168	1.400	0.065	0.010	0.080
74/12/14	15 50		0.216	0.700	0.055	0.015	0.040
75/01/11	15 30		0.384	2.100	0.115	0.015	0.066
75/02/08	15 30		0.460	0.700	0.064	0.016	0.050
75/03/08	15 00		0.010	1.050	0.084	0.016	0.110
75/04/12	14 15		0.005	0.850	0.035	0.075	0.100
75/05/10	13 30		0.020	2.300	0.045	0.010	0.060
75/07/22	11 30		0.090	0.250	0.120	0.015	0.020
75/08/23	09 30		0.260	2.500	0.040	0.015	0.180
75/09/20	10 30		0.050	1.300	0.022	0.020	0.140
75/10/04	12 20		0.045	1.800	0.040	0.020	0.120

STORET RETRIEVAL DATE 76/08/12

492482
39 54 58.0 111 54 02.0 4
CURRENT CREEK
49 15 SANTAQUIN
T/UTAH LAKE 150792
HWY 17 BRDG 2.7 MI S OF GOSHEN
11EPALES 211120
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
74/11/13	14	50	0.256	1.950	0.050	0.005	0.040
74/12/14	16	00	0.552	0.500	0.015	0.005	0.020
75/01/11	16	00	0.600	2.000	0.065	0.010	0.020
75/02/08	16	00	0.260	0.200	0.024	0.008K	0.010
75/03/08	15	30	0.395	1.200	0.032	0.008	0.030
75/04/12	14	45	0.520	1.300	0.025		0.010K
75/05/10	13	45	0.045	0.850	0.025	0.010	0.060
75/07/22	11	45	0.160	0.200	0.060	0.010	0.010K
75/08/23	09	50	0.095	0.650	0.030	0.010	0.080
75/09/20	10	50	0.055	1.200	0.015		0.120
75/10/04	12	35	0.055	1.600	0.010	0.010	0.060

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924DA TF4924DA P005300
40 03 00.0 111 44 30.0 4
PAYSON
49 7.5 SPANISH FORK
T/UTAH LAKE 150791
BEJAMIN SLOUGH
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/30	12 40		2.880	14.000	2.160	4.600	4.800	0.400	0.400
75/02/19	09 30		2.000	15.000	3.700	5.400	6.700	0.400	0.400
75/03/26	11 35		3.200	16.000	3.920	5.040	7.700	0.500	0.500
75/04/22	12 30		3.150	10.500	1.750		6.800	0.750	0.600
75/05/14	12 55		5.800	8.950	0.060	4.700	5.700	0.800	
75/06/12	09 40		6.200	3.000	0.050K	2.800	3.900	0.650	0.630
	11 40		3.600	5.200	0.050K		0.200		
75/07/31	11 30		5.600	7.500	0.059	1.950	2.500	1.200	1.200
75/08/20	10 30		6.300	9.400	0.041	2.200	3.000	1.500	1.350
75/09/16	11 50		4.600	11.000	0.175	2.000	2.900	0.800	0.800
75/10/15	12 15		5.200	13.000	0.660	2.325	2.900	0.600	0.600
75/11/18	12 00		5.800	10.000	0.037	3.400	4.200	0.600	0.600
75/12/04	11 00		4.100	13.000	1.600	4.300	5.400	0.900	0.900

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

492408 TF492408 P001200
40 03 30.0 111 41 00.0 4
SALEM
49 7.5 SPANISH FORK
T/UTAH LAKE 150791
BEER CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/30	11 55		4.900	13.000	0.810	2.500	3.000	0.340	0.280
75/02/20	10 00		3.840	11.500	0.609	2.150	2.800	0.190	0.180
75/03/26	11 00		4.160	9.900	0.410	2.480	3.300	0.200	0.250
75/04/22	11 40		3.150	6.600	0.230	3.700	5.500	1.500	1.600
75/05/14	11 55		5.750	10.000	0.060	3.150	4.500	0.180	0.190
75/06/11	09 55		10.000	9.900	0.050K	1.980	4.000	0.190	0.200
75/07/31	11 00		8.400	7.900	0.025	2.300	3.300	0.200	0.250
75/08/20	11 40		8.900	5.700	0.025K	2.200	3.800	0.300	0.250
75/09/16	11 20		7.600	7.100	0.095	2.400	4.300	0.340	0.300
75/10/15	11 45		6.500	8.500	0.064	2.630	5.500	0.180	0.150
75/11/18	11 40		7.200	12.000	0.200	3.100	5.500	0.800	0.700
75/12/04	10 30		7.200	10.000	2.500	3.300	4.100	0.320	0.300

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924HA TF4924HA P007700
40 06 00.0 111 39 00.0 4
SPANISH FORK
49 7.5 SPANISH FORK
T/UTAH LAKE 150791
DRY CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/30	11 25		3.520	16.000	0.990	2.600	3.800	2.000	1.600
75/02/19	08 45		4.000	4.000	0.120	2.100	2.800	2.500	2.300
75/03/26	10 30		2.800	10.000	0.450	2.240	2.600	2.000	1.760
75/04/22	11 30		1.450	14.500	2.400	3.600	5.000	1.500	1.700
75/05/14	11 30		3.800	14.500	2.100	3.500	4.000	2.200	
75/06/11	09 10		5.700	5.500	0.050K	1.400	1.900	3.000	2.500
75/07/31	10 30		6.400	7.800	0.025K	1.650	2.200	2.500	2.600
75/08/20	10 00		6.300	10.000	0.075	1.900	2.600	2.500	2.500
75/09/16	11 00		6.000	11.000	0.250	2.200	3.400	2.500	2.500
75/10/15	11 30		5.600	14.000	0.510	2.500	3.500	1.800	1.800
75/11/18	10 55		5.600	16.000	1.450	3.150	4.000	2.500	2.500
75/12/04			5.800	16.000	1.900	3.100	5.800	2.100	2.100

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924KA TF4924KA P002700
40 10 35.0 111 37 12.0 4
SPRINGVILLE
49 7.5 SPRINGVILLE
T/UTAH LAKE 150791
SPRING CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/30	10	50	0.960	22.500	5.200	2.400	3.700	1.300	1.300
75/02/19	13	10	0.960	16.000	2.700	2.700	4.100		1.170
75/03/26	10	00	1.120	21.000	6.000	2.460	3.600	1.500	0.950
75/04/22	10	50	0.850	22.000	7.900	3.150	4.600	1.400	0.920
75/05/14	10	55	1.900	12.500	1.850	2.600	2.900	1.000	1.000
75/06/11	10	30	4.500	4.150	0.050K	1.250	1.600	2.600	2.400
75/07/31	09	30	5.400	4.500	0.025K	0.910	1.400	3.500	3.700
75/08/20	09	30	5.200	5.300	0.034	1.100	1.500	2.500	2.750
75/09/16	10	50	4.400	7.650	0.080	1.150	1.700	2.500	2.750
75/10/15	10	15	3.800	12.500	0.100	1.700	2.200	2.000	2.300
75/11/18	10	40	3.450	11.000	0.061	2.000	2.500	0.800	0.900
75/12/04	09	50	1.450	21.000	4.000	2.000	3.300	1.800	1.700

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924KB N04924KB P
40 12 00.0 111 35 30.0 4
SPRINGVILLE FISH HAT
49 7.5 SPRINGVILLE
T/UTAH LAKE 150791
SPRING CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/30	10 15		0.720	1.000K	0.080K	0.110	0.230	3.250	3.300
75/02/20	12 45		0.720	1.000K	0.098	0.100	0.100		3.100
75/03/26	09 20		0.720	1.000K	0.080K	0.099	0.100		3.000
75/04/22	10 40		0.650	0.500K	0.130	0.120	0.170	3.400	3.500
75/05/14	10 15		0.700	0.600	0.100		0.100K		
75/06/11	10 40		0.850	1.000	0.050K	0.062	0.150	3.950	3.370
75/07/31	09 50		0.675	1.000	0.025K	0.034	0.100K	6.800	6.900
75/08/20	09 00		0.675	1.400	0.035	0.044	0.100K	6.900	6.900
75/09/16	10 30		0.600	0.650	0.110	0.050	0.100K	6.900	6.900
75/10/15	09 55		0.700	1.600	0.025K	0.056	0.120	6.900	6.900
75/11/18	10 00		0.725	2.800	0.025K	0.050	0.100K	6.900	6.900
75/12/04	09 40		0.700	1.000K	0.100	0.125	0.140	6.800	6.800

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924KC NO4924KC P
40 12 00.0 111 35 30.0 4
SPRINGVILLE FED HAT
49 7.5 SPRINGVILLE
T/UTAH LAKE 150791
SPRING CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/30	10 05		0.720	1.000K	0.380	0.110	0.170	4.550	4.500
75/02/20	13 00		0.640	1.300	0.080K	0.120	0.350		3.800
75/03/26	09 10		0.640	0.500K	0.080K	0.080K			3.700
75/04/22	09 40		0.650	0.500K	0.200	0.086	0.100K	4.600	4.500
75/05/14	10 35		0.650	0.820	0.050K	0.090	0.100K	0.160	
75/06/11	10 48		0.700	0.500K	2.300	0.050K	0.100	4.590	4.050
75/07/31	10 00		0.650	1.500	0.025K	0.033	0.120	22.600	22.800
75/08/18	09 05		0.650	1.175	0.025	0.110	0.110	22.600	22.600
75/09/16	10 10		0.600	1.000	0.110	0.042	0.100K	20.000	20.000
75/10/15	09 45		0.725	2.100		0.029	0.100K	16.000	16.000
75/11/18	10 20		0.700	2.600	0.025K	0.055	0.600	20.000	20.000
75/12/04	09 30		0.700	1.100	0.100	0.050	0.100K	16.000	16.000

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924KD PD4924KD P
40 11 30.0 111 38 00.0 4
PACIFIC STATES IRON
49 15 PROVO
T/UTAH LAKE 150791
SPRING CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/08	08	55	0.240	2.700	0.091	0.100	0.100	0.350	0.320
75/02/20	13	30	0.080	4.000	0.110	0.050K	0.100K	0.300	0.320
75/03/26	08	55	0.080	2.700	0.240	0.040	0.100K	0.300	0.320
75/04/22	09	30	0.050	1.800	0.360	0.050K	0.100K	0.320	0.320
75/05/14	10	00	0.050	3.200	0.059	0.050K	0.100K	0.380	
75/06/11	11	30	0.200	3.400	0.230	0.050K	0.100K	0.450	0.330
75/07/31	09	30	0.025	3.000	0.039	0.025K	0.110	0.450	0.500
75/08/20	08	45	0.050	4.000	0.050	0.025K	0.100K	0.300	0.410
75/09/16	09	50	0.025	4.200	0.025K	0.025	0.230	0.330	0.350
75/10/15	09	30	0.125	5.000	0.140	0.025K	0.100K	0.370	0.390
75/11/18	10	10	0.100	6.000	0.175	0.064	0.290	0.450	0.430
75/12/04	09	15	0.175	4.200	0.210	0.025K	0.100	0.400	0.400

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924KE PD4924KE P
40 11 30.0 111 37 00.0 4
REILLY TAR CHEMICAL
49 15 PROVO
T/UTAH LAKE 150791
SPRING CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/08	08	40	0.480	1.300	0.050K	0.072	0.100K	0.400	0.460
75/02/19	14	10	0.560	1.800	0.080K	0.091	0.170	0.190	
75/03/26	08	40	0.640	1.000K	0.080K	0.080K	0.100K	1.300	0.460
75/04/23	09	15	0.550	0.500K	0.260	0.050	0.100K	0.600	0.500
75/05/14	09	30	0.100	3.500	0.050K	0.050K	0.100K	0.050	
75/06/11	11	00	0.800	1.700	0.050K	0.050K	0.110	0.460	0.460
75/07/31	08	30	0.550	1.200	0.025K	0.025K	0.100K	0.800	0.800
75/08/20	08	30	0.275	3.500	0.025K	0.025	0.100	0.100	0.400
75/09/16	09	30	0.500	4.400	0.025K	0.025K	0.100K	0.750	0.800
75/10/15	09	15	0.550	2.400	0.025K	0.025K	0.100K	0.500	0.700
75/11/18	09	50	0.525	3.000	0.025K	0.050	0.100K	0.400	0.500
75/12/04	08	55	0.300	3.550	0.025	0.039	0.100K	0.500	0.500

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924LA TF4924LA P060000
40 12 45.0 111 39 00.0 4
PROVO WWTP
49 7.5 PROVO
T/UTAH LAKE 150791
MILL RACE CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/07	11 30		1.200	15.000	1.300	2.300	3.300	3.700	9.960
75/02/18	13 00		0.880	15.000	2.560	2.500	3.500	11.000	10.300
75/03/25	12 30		0.800	11.000	2.000	2.600	3.400	9.000	10.000
75/04/23	13 40		1.100	12.000	1.200	2.400	3.600	7.500	8.000
75/05/15	12 30		1.750	12.000	0.280	2.600	2.900	11.000	
75/06/18	10 30		2.900	4.800	0.050K	0.990	1.500	14.600	11.500
75/07/30	12 00		1.650	9.150	0.033	1.250	2.000	17.000	17.500
75/08/19	13 00		1.450	9.000	0.025	1.000	1.700	10.000	14.000
75/09/10	12 30		1.300	11.500	1.720	1.600	2.200	9.000	8.800
75/10/14	10 00		0.925	14.000	0.845	1.800	2.600	9.000	8.000
75/11/18	09 30		1.300	13.000	0.540	2.100	3.300	9.000	8.800
75/12/03	10 00		1.450	13.000	0.380	1.880	2.800	15.000	14.000

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924MA NO4924MA P000060
40 19 45.0 111 37 30.0 4
SPRINGDELL
49 15 OREM
T/UTAH LAKE 150791
PROVO RIVER
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/30	09 15		0.480	1.570	0.080K	0.167	0.167	0.010	0.008
75/04/10	11 00		0.450	22.000	0.380	3.150	10.500	0.005	0.008
75/04/22	13 50		0.400	6.400	0.230	1.150	2.100	0.009	0.008
75/05/29	08 30		0.450	12.000	1.050	1.900	3.600	0.006	
75/07/30	13 00		0.400	16.000	0.140	1.720	2.800	0.010	0.010
75/08/20	14 00		0.450	13.000	0.037	1.600	3.400	0.010	0.010
75/09/10	12 00		0.400	8.600	0.025K	1.570	4.200	0.010	0.010
75/10/14	12 30		0.375	16.000	0.200	1.250	2.700	0.007	0.007
75/11/18	08 30		0.350	22.000	0.570	2.000	2.700	8.000	8.000
75/12/03	08 30		0.575	24.500	1.000	3.000	10.000	0.009	0.009

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924PA PD4924PA P
40 19 00.0 111 45 00.0 4
US STEEL POND
49 7.5 OREM
T/UTAH LAKE 150791
UNNAMED CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/07	10	20	4.900	6.000	0.160	0.084	0.100K	23.000	22.500
75/02/19	10	45	9.800	13.000	3.040	0.084	0.100K	24.000	24.000
75/03/25	11	05	3.360	7.600	0.090	0.110	0.110	30.000	22.400
75/04/23	11	00	2.900	14.000	4.700	0.068	0.100K	34.000	33.000
75/05/15	10	30	2.800	13.000	2.600	0.073	0.100	34.000	33.000
75/07/30	10	40	5.400	11.500	0.870	0.050	0.120	18.000	18.500
75/08/19	11	00	4.400	3.200	0.040	0.058	0.100K	18.000	18.000
75/09/10	11	20	2.630	0.920	0.029	0.025K	0.100K	18.000	18.500
75/10/16	14	15	3.900	8.800	0.065	0.034	0.100K	18.000	18.500
75/11/19	10	00	3.400	7.400	0.025	0.041	0.100K	18.000	18.500
75/12/03	10	15	4.000	6.600	0.066	0.045	0.220	18.000	18.300

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

4924WA NO4924WA P
40 23 00.0 111 51 00.0 4
LEHI ROLLER MILL
49 7.5 LEHI
T/UTAH LAKE 150791
UNNAMED CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/07	09 10		2.640	52.000	0.450	1.680	6.700	0.002	
75/02/18	09 40		4.000	2.600	0.120	0.360	0.400	0.001	0.003
75/03/25	08 45		0.050	4.100	0.230		1.000	0.007	0.003
75/04/23	09 00		2.300	2.100	0.510	0.370	0.510	0.004	0.003
75/05/14	09 25		6.500	53.000	4.000	2.950	7.300	0.014	0.003
75/06/12	08 30		3.300	43.000	0.780	1.600	5.700	0.002	0.003

STORET RETRIEVAL DATE 76/08/12

4924XA TF4924XA P033000
40 17 00.0 111 43 00.0 4
OREM CITY
49 7.5 OREM
T/UTAH LAKE 150791
POWELL SLOUGH
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/07	11	00	6.720	17.000	4.600	6.100	7.400		3.200
75/02/18	11	15	0.640	21.000	7.850	6.900	8.200	3.000	3.200
75/03/25	12	00	0.480	18.000	4.700	8.100	9.400	3.300	3.500
75/04/23	12	15	0.700	22.000	9.500	6.300	7.200	3.300	3.400
75/05/15	11	40	2.300	13.500	2.200	6.300	6.800	3.500	3.400
75/06/12	10	30	4.300	17.000	6.400	7.300	8.400	3.300	3.500
75/07/30	10	10	3.800	9.100	0.075	5.200	6.100	3.000	3.200
75/08/19	11	30	3.300	14.000	1.800	3.150	4.000	3.500	3.250
75/09/10	10	30	3.300	16.500	5.300	3.500	4.500	3.500	3.700
75/10/14			2.200	13.000	7.000		7.900	3.500	3.500
75/11/19	10	45	2.000	18.000	1.400	7.000	8.700	3.000	3.200
75/12/03	10	15	1.800	17.000	3.400	6.600	7.600	4.000	4.100

STORET RETRIEVAL DATE 76/08/12

4924YA TF4924YA P004200
40 23 00.0 111 52 00.0 4
LEHI CITY
49 7.5 LEHI
T/UTAH LAKE 150791
UNNAMED STREAM
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/07	08 50		2.080	24.000	8.700	6.300	7.800	0.400	0.480
75/02/18	09 50		1.520	20.000	6.800	4.700	5.900	0.450	0.500
75/03/25	09 05		1.300	15.000	3.800	6.900	7.600	0.560	0.490
75/04/23	09 20		2.000	13.000	2.900	5.750	6.600	0.600	0.490
75/05/15	09 25		6.600	9.800	0.210	4.200	4.500	0.500	0.550
75/06/12	08 20		6.700	3.200	0.140	2.300	3.000	0.750	0.650
75/07/30	08 30		4.400	8.300	0.130	2.100	3.100	1.000	1.000
75/08/19	08 30		2.630	4.100	0.270	1.150	1.500	1.000	1.000
75/09/10	08 45		5.800	6.300	0.050	2.100	2.800	1.000	1.000
75/10/14	10 00		4.300	13.500	0.740	2.750	3.650	0.600	0.600
75/11/19	08 30		4.000	17.000	1.650	3.100	4.300	0.500	0.500
75/12/03	08 30		5.200	12.000	2.800	4.700	5.000	0.500	0.500

STORET RETRIEVAL DATE 76/08/12

4924ZA TF4924YA P006000
40 21 00.0 111 45 00.0 4
PLEASANT GROVE
49 7.5 OREM
T/UTAH LAKE 150791
UNNAMED STREAM
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-D'S ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/07	10 05		3.040	8.500	0.100	2.900	3.600	1.600	0.870
75/02/18	10 30		3.360	16.000	2.700	3.500	4.700	0.700	0.850
75/03/25	09 40		2.560	12.000	1.900	3.900	4.800	0.900	0.890
75/04/23	13 00		5.250	26.000	11.500	5.100	6.600	1.100	1.130
75/05/15	10 00		5.600	15.000	2.700	2.700	5.100	1.200	1.000
75/06/12	09 30		6.100	7.200	0.066	2.100	3.400	1.300	1.200
75/07/30	10 00		7.500	9.100	0.025K	1.600	2.500	1.300	1.300
75/08/19	09 00		2.000	8.800	0.100	1.650	2.200	1.500	1.400
75/09/10	09 00		7.200	9.700	0.035	1.820	2.600	1.500	1.500
75/10/14	10 30		6.300	14.000	0.725	2.200	3.000	1.000	1.000
75/11/19	09 45		5.800	16.000	1.200	2.250	3.300	0.900	0.900
75/12/03	09 05		5.000	9.500	0.250	1.900	2.800	1.400	1.400

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 76/08/12

492421 TF492421 P009000
40 22 00.0 111 48 00.0 4
AMERICAN FORK
49 7.5 LEHI
D/UTAH LAKE 150791
UTAH LAKE
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/07	09	45	0.880	19.000	7.250	6.500	7.400	1.500	1.500
75/02/18	10	10	0.560	23.000	9.800	5.500	6.900	1.000	1.200
75/03/25	09	20	0.720	23.000	11.200	9.000	9.400	1.500	1.800
75/04/23	10	00	1.200	39.000	19.500	10.500	11.000	1.800	1.500
75/05/15	09	55	1.200	23.000	9.300	4.000	5.100	2.900	3.000
75/06/12	09	40	1.950	14.500	0.094	1.650	3.700	7.000	4.000
75/07/30	09	00	2.200	5.600	0.025K	0.826	1.200	7.000	7.000
75/08/19	08	30	2.200	5.500	0.041	1.150	1.700	6.000	6.250
75/09/10	09	20	3.100	5.900	0.025K	1.700	2.200	6.500	6.500
75/10/14	10	15	1.400	24.000	6.900	3.000	4.400	3.000	3.000
75/11/19	09	45	1.800	19.000	5.100	4.400	5.600	1.800	1.700
75/12/03	08	45	1.950	18.000	6.500	5.100	7.500	1.000	0.900

K VALUE KNOWN TO BE
LESS THAN INDICATED

18

GRET RETRIEVAL DATE 76/08/12

492432 TF492432 P
40 19 30.0 111 44 30.0 4
US STEEL WWTP
49 7.5 OREM
T/UTAH LAKE 150791
UNNAMED CREEK
11EPALES 2141204
0000 FEET DEPTH CLASS 00

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
75/01/07	10 45		2.080	1.700	0.050K	0.306	0.360	0.001	0.010
75/02/19	11 15		3.680	1.000K	0.080K	0.430	0.490	0.014	0.015
75/03/25	11 30		4.320	1.000K	0.150	0.509	0.550	0.007	0.012
75/04/23	11 30		3.150	3.100		1.550	1.600	0.014	0.015
75/05/15	10 50		5.200	0.500K	0.050K	0.500	0.570	0.003	
75/06/12	11 50		4.300	2.000	0.050	0.410	0.535	0.004	0.030
75/08/19	11 15		1.880	1.600	0.050	0.350	0.400	0.035	0.025
75/09/10	11 00		1.400	1.500	0.100	0.230	0.310	0.008	0.008

K VALUE KNOWN TO BE
LESS THAN INDICATED

28